AMENDMENT TO ENVIRONMENTAL ASSESSMENT
& MEPA HB495 CHECKLIST

Ulm Pishkun State Park Interpretive Trail

August 2005

Montana Fish, Wildlife & Parks

The purpose of this amendment to the Ulm Pishkun Interpretive Trail Environmental Assessment is to address three segments of the existing interpretive trail that need relocation due to public safety hazards and erosion concerns. The conditions that have prompted our proposed actions are a result of developing drainage and erosion patterns that have developed since the trail was constructed in 2001. The segments are located in Ulm Pishkun State Park, NE/4, SW/4, Section 18, T.20N, and R 2 E.

Proposed Action # 1

The first segment of trail needing relocation is at the end of the graveled trail that extends west from the visitor center. The trail currently traverses through two soil-piping areas for a distance of approximately 100 feet. The soil piping has created large holes (chimney effect) in the Bentontic clay. The holes extend beneath the existing trail, and are 2-3 feet deep in places. This is a safety hazard to the public walking on the trail.

Consideration was given to the following alternatives:

1) Digging the area out with a backhoe, and installing a culvert. This was eliminated as an alternative, because the best way to prevent soil piping is to divert water away from the site. The trail is in the natural drainage, so this is not a practical solution.

2) Building a boardwalk or bridge across the soil piping area. This would require a very long structure (approximately 100 feet) that would have to be well anchored and would be subject to considerable annual maintenance.

3) Relocation of the trail and avoid the area completely. This can be done in the newly staked location that extends about 600 feet around the soil piping. We will also abandon and rehabilitate about 50 feet of existing trail within the soil piping area. Little surface disturbance will be necessary to construct the new trail. The grass will be trimmed to define the new trail route. A small six feet long by four feet wide footbridge will need to be built over an existing drainage on the relocated trail. It will be built and placed on the existing ground without any soil disturbance in such a manner that the water in the natural drainage will flow under it. The footbridge surface will maintain the same tread elevation as the soil tread. This is our preferred alternative.

The purpose of the nature trail is to interpret points of interest along the trail and to provide hikers access to the top of the buffalo jump. Soil piping in this area is relatively rare, and it occurs naturally at the site. The area has excellent examples; therefore, it will benefit the public to interpret the occurrence rather than try to maintain the trail through this location. A spur off the new main trail will take the public to the soil piping area. The public will be required to backtrack 100 feet to the main trail, because the trail will be closed beyond the interpretive point. Signs interpreting the soil piping will be placed at the end of this trail spur.

Proposed Action # 2

The second segment of trail needing to be relocated is about thirty feet uphill from the relocation mentioned above. This second relocation is necessary because the existing trail travels into a gumbo clay drainage creating a slipping and falling hazard to the public when the site is wet.

After traveling about 120 feet in the drainage the trail switchbacks out of it, and then travels straight uphill on an outcrop of clay at about a 65-degree slope. This trail also becomes slick when wet, and is a safety hazard to the public because of its steepness. Taking the trail off the 65-degree slope will eliminate water flows that travel straight down the trail. This will reduce erosion considerably. A potential costly annual maintenance problem can be eliminated with the relocation.

It is necessary to relocate 976 feet of trail, at an average grade of 12 percent to tie back into the original trail at an acceptable location. Three small footbridges will need to be installed. The bridges will all be four feet wide. The first is about 8 feet long, the second is about 10 feet long and the third is about 14 feet long. They will be laid on the natural surface without any surface disturbance in such a manner that a trail walker will be able to step on the bridge and keep walking at a natural pace. Little surface disturbance will be necessary to construct this relocated segment. We will trim the grass to define the route, and the public can begin using it. Foot traffic will pack the vegetation, but this is expected to regenerate annually; therefore, soil disturbance and erosion impacts will be minimal. Increased visitation could result in loss of vegetation in the trail, but the relocated segment will be placed in such a manner as to prevent future erosion potential.

Proposed Action # 3

The third and last segment of trail needing relocation is on the east side of the park located approximately one-half of the distance between the Visitor Center and the top of the jump. The relocation is needed because the existing trail travels down hill at such a grade that water flowing to the trail will run down the trail instead of across it. This has not become a problem yet, but it will in the future. The relocation will save significant erosion potential on the trail and future maintenance.

Significant compaction from trail use has not yet occurred and enough vegetation roots are still present to allow the trail to grow back naturally. Erosion matting will be installed on the rehabilitated portion of the trail, and a sign placed indicating reclamation of the trail is taking place. The public will be asked to stay off the rehabilitated area.

The third relocated trail is about 750 feet long at a reduced grade between 7 and 9 percent. The re-routed trail will be located perpendicular to the fall line, which will allow water to flow across the trail and not down it, as is occurring on the existing trail. No surface disturbance will be necessary to construct the trail. The grass will be cut to establish the route for the public. Signs will also be used so that hikers can easily follow the trail.

Conclusion

The recommended actions in this amendment were developed in consultation with Bob Korb, Engineering Technician and Trails Specialist with the Lewis & Clark National Forest. The estimated cost of constructing four additional footbridges and reclamation of the abandoned trail is $4,800. The funding will be taken out of the park's operating budget. No additional costs to mark the new trail will occur. Cutting the grass on the trails is currently done for safety concerns.

Cultural consultation is required for trail relocation. Gar Wood, a contract archeologist, visited the site on Thursday May 5, 2005. A report was prepared and submitted to the State Historic Preservation Office (SHPO) on August 8, 2005. Notification was received from the SHPO on August 9, 2005, concluding that the project should be allowed to proceed from a cultural resources standpoint.

Other environmental documentation has been adequately addressed in the original trail Environmental Assessment, issued on November 11, 2001. This document supplements the original assessment. A map illustrating the proposed trail relocations is attached.

No significant impacts are anticipated if the proposed relocations are approved. In fact, the relocated trail will have fewer impacts on erosion and drainage patterns in the park than existing conditions in the park.

The public will be notified of this proposed trail relocation and alternatives by the following methods:

- Public notice published once in the Great Falls Tribune, Helena Independent Record and the Cascade County News.
- FWP Website at www.fwp.state.mt.use

The public comment period will last for two weeks. Comments should be postmarked by September 23, 2005 and addressed to:
Trail Amendment EA
Ulm Pishkun State Park
P.O. Box 109
Ulm, MT 59485

This is considered sufficient public involvement. An EA is considered the proper level of evaluation; an EIS is not required since no significant impacts were assessed in the original trail EA issued on November 11, 2001, nor assessed in this relocation project. No threatened or endangered species are known to inhabit the area proposed for pedestrian traffic and cultural clearance was obtained.

This EA amendment was prepared by:
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